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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/432,022	10/29/1999	JOHN E. DONOHUE	500.723US1	9521
34206	7590	06/23/2004	EXAMINER	
FOGG AND ASSOCIATES, LLC P.O. BOX 581339 MINNEAPOLIS, MN 55458-1339			KUMAR, PANKAJ	
		ART UNIT		PAPER NUMBER
		2631		14
DATE MAILED: 06/23/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/432,022	DONOHUE, JOHN E.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Pankaj Kumar	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 21 April 2004.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 8-22 is/are allowed.
- 6) Claim(s) 1-3, 7, 23, 30 and 31 is/are rejected.
- 7) Claim(s) 4-6 and 24-29 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed have been fully considered but they are not persuasive with respect to Momtaz but are persuasive with respect to Duckworth.
2. Applicant argues that Momtaz does not teach the motivation of control being diverted to a second loop when a link is interrupted and one loop is unable to compensate for the data frequency change exceeding the phase margin of the phase detector. This is not persuasive since Momtaz teaches in col. 10 third full paragraph "... if the input data frequency should drift slightly, the phase only loop is able to compensate for the drift so long as the data frequency change does not exceed the phase margin of the detector. ... if the drift is large enough or if the incoming data link is temporarily interrupted, the phase only loop is unable to compensate and it must be disabled in its turn and control passed to the phase and frequency loop for acquisition". Therefore, Momtaz teaches control being diverted (Momtaz col. 10 third full paragraph: "control passed") to a second loop (Momtaz col. 10 third full paragraph: "phase and frequency loop") when a link is interrupted (Momtaz col. 10 third full paragraph: "if the incoming data link is temporarily interrupted") and one loop is unable to compensate (Momtaz col. 10 third full paragraph: "the phase only loop is unable to compensate") for the data frequency change (Momtaz col. 10 third full paragraph: "if the input data frequency should drift") exceeding the phase margin of the phase detector (Momtaz col. 10 third full paragraph: "phase margin of the detector").
3. Applicant argues that Momtaz does not teach holding the output frequency of the VCO at a substantially constant frequency when the VCO is interrupted. This is not persuasive since

Momtaz teaches in col. 10 third full paragraph starting at line 39 “After the PLL is locked to a known frequency by the phase and frequency loop, this loop is disabled and synchronization ... is then performed ... with the phase only loop. ... if ... the phase only loop is unable to compensate and it must be disabled in its turn and control passed to the phase and frequency loop ...”. Therefore, Momtaz teaches holding the output frequency (Momtaz col. 10 third full paragraph: “PLL is locked to a known frequency”) of the VCO (Momtaz col. 10 second, fourth full paragraphs) at a substantially constant frequency (Momtaz col. 10 third full paragraph: “a known frequency”; col. 10 fourth full paragraph: “known frequency reference”) when the VCO is interrupted (Momtaz col. 10 second, fourth full paragraph: “VCO frequency deviates”; “loss of ... lock”; “looses lock”).

4. Applicant argues that Momtaz teaches away from holding the output frequency of the VCO at a substantially constant frequency when the VCO is interrupted since Momtaz teaches that such monitoring is no longer necessary which was from a portion of col. 10 fourth full paragraph of Momtaz. This is not persuasive. Momtaz’s col. 10 third full paragraph discusses state of the art prior to Momtaz and this paragraph, as discussed above, teaches holding the output frequency of the VCO at a substantially constant frequency when the VCO is interrupted. Therefore, Momtaz teaches toward the fact that Momtaz has discussed prior art that teaches towards the portion of applicant’s claim cited. While Momtaz explains prior art, Momtaz teaches the cited portion of applicant’s claim in the art prior.

***Response to Amendment***

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 3, 7, 23, 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maddy USPN 5,334,952 in view of Walley USPN 6,606,364 and further in view of Momtaz USPN 5,950,115.

7. See prior action for details.

***Allowable Subject Matter***

8. Claims 4, 5, 6, 24, 25, 26, 27, 28, 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 15 to 22 are allowed. See prior action for details.

10. Claims 8 to 14 are allowed based on arguments

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (703) 305-0194. The examiner can normally be reached on Mon, Tues, Wed and Thurs after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (703) 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PK

TEMESGHEN GHEBRETSINAE  
PRIMARY EXAMINER

6/20/04